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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,460	04/19/2001	Yoshiyuki Nitta	206346US-2	6752

22850 7590 03/11/2004

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EXAMINER	
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ART UNIT	PAPER NUMBER
2114	6

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/837,460	NITTA, YOSHIYUKI
	Examiner	Art Unit
	Gabriel L. Chu	2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6* is/are allowed.

6)☒ Claim(s) *1-5,8 and 9* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-5 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Referring to claims 2-5 and 9, it is not clear in what capacity "own" limits and defines the invention. For the purpose of examination, "own" is understood to define a local relationship between a main control unit and a communication control unit (computer), e.g., in the normal system, the normal main control unit is "own" to the normal communication control unit (computer). Subsequent antecedent errors involving "own" (e.g., claim 2: "the own communication control unit"), are then understood to refer to the previously defined sets of main control units and communication control units (computers).

As an example, claim 2 is rewritten: "The field apparatus control system according to claim 1, wherein each of said normal and standby systems of communication control units further comprises: operation request transmission means, when utilizing the communication control unit of the normal system, for transmitting an

operation request to the field apparatus based on control information, said control information being transmitted from the normal main control unit; means for receiving response information corresponding to the operation request transmitted from the field apparatus to the address so as to transmit the received response information to the normal main control unit from the normal communication control unit or to the standby main control unit from the standby communication control unit; means for judging whether or not failure occurs to the normal and standby systems; means for stopping operation of the normal communication control unit when the judgment means judges that failure occurs to the normal system; means for the standby communication control unit to monitor the operation of the normal communication control unit, and, when, by the monitored result, detecting the stop of the operation of the normal communication control unit, switches the standby communication control unit to the normal system."

Appropriate correction is required. In correcting these claims, Applicant should take care to amend the claims so as to leave no doubt as to which system is being referred, e.g. claim 2: "the main control unit of the own system".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 4, 5, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6473396 to Kumar. Referring to claim 1, Kumar discloses a field apparatus control system for controlling a field apparatus connected to a field bus, comprising: duplicated main control units for controlling the field apparatus (From line 8 of column 3, "The apparatus may comprise a bus on which a plurality of server modules may be coupled to. One of the server modules may be configured to be active and remaining server modules may be configured to be on standby. A plurality of client modules may be coupled to the bus and configured to be in communication with the active server module using logical addresses."); and duplicated communication control units for processing information communication between the main control units and the field apparatus via the field bus, respectively, wherein one of the duplicated main control units and one of the communication control units constitute a normal system (From line 42 of column 3, "According to one example, the physical slots in which the various hardware modules are connected to, are assigned physical addresses to identify the location of the hardware modules." Further, from line 11 of column 3, "One of the server modules may be configured to be active".), and other of the duplicated main control units and other of the communication control units constitute a standby system (From line 12 of column 3, "and remaining server modules may be configured to be on standby.") and each of the normal system of communication control unit and the standby system of communication control unit have a same address on a network via the field bus, which is allocated to each of the normal and standby systems of

communication control systems, and wherein information that is outputted to the address from the field apparatus via the field bus is transmitted to the normal and standby systems of communication control units, respectively (From line 61 of column 4, "According to another method, packets sent by the client modules 121, 122, 123 to the active server module 101 are also routed by the active server module 101 to one of the standby modules 102. However, only the active server module 101 processes the received packets. As for the standby module 102, the received packets may be stored in a buffer on a first in first out basis. As the buffer overflows, the earlier received packets are purged.").

Referring to claim 2, Kumar discloses each of said normal and standby systems of communication control units further comprises: operation request transmission means, when the own communication control unit is the normal system, for transmitting an operation request to the field apparatus based on control information, said control information being transmitted from the main control unit of the own system (From line 12 of column 5, "Turning now to the plurality of client modules 121, 122, 123, in one example, client modules 121, 122, 123 may receive packets from the active server module 101 to transmit the packets into the networking system."); means for receiving response information corresponding to the operation request transmitted from the field apparatus to the address so as to transmit the received response information to the main control unit of the own system (From line 34 of column 5, "In one example, an echo back protocol may be implemented in which a signal is sent back to the transmitting module if the transmitted packet is received at the destination module.

Thus, if the client module 121, after a predetermined number of attempts, is not able to transmit a packet to the active server module 101, may reprogram the lookup table 125 to reflect the physical address of a predetermined standby module 102 to be the new active server module."); means for judging whether or not failure occurs to the own system; means for stopping operation of the own communication control unit, when the judgment means judges that failure occurs to the own system and the own communication control unit is the normal system; means that, when the own communication control unit is the standby system, monitors the operation of the other communication control unit, which is the normal system, and, when, by the monitored result, detecting the stop of the operation of the other communication control unit, switches the own communication control unit, which is the standby system, to the normal system (From line 44 of column 4, "In one example, the active server module 101 may send a packet to one of the standby modules 102. In the event the standby module 102 does not receive a packet from the active server module 101 within a predetermined period of time, the standby module 102 activates to become the new active server module. Once activated, the new active server module 102 may take over the functions of the previous server module 101 and may start to send packets at fixed intervals to the next standby module 103 at its physical address to indicate that it is functioning. In another method, the standby module 102 may at fixed intervals, send a packet to the active server module 101 at its physical address through the bus 110. In the event the standby module 102 does not receive an acknowledgment from the active

server module 101 within a predetermined period of time, the standby module 102 activates to become the active server module.").

Referring to claim 4, Kumar discloses a field apparatus control system for controlling duplicated field apparatuses constituting normal and standby systems of field apparatuses (From line 12 of column 5, "Turning now to the plurality of client modules 121, 122, 123, in one example, client modules 121, 122, 123 may receive packets from the active server module 101 to transmit the packets into the networking system. Additionally, client modules 121, 122, 123 may receive packets from the networking system and transmit the packets to the active server module 101. According to one example, the client modules 121, 122, 123 may identify the location of the active server module 101 by using a lookup table 125, 126, 127 which contains the physical address of the active server module 101. In the event where the current active server module 101 has failed, and the role is assumed by the standby module 102, client modules 121, 122, 123 need to detect the changeover of the active server module so that communication can be established with the new active server module. Typically, this involves the client boards 121, 122, 123 reprogramming their lookup tables 125, 126, 127 to establish the physical address of the new active server module."), comprising: duplicated field buses connected to the duplicated field apparatuses, respectively, said one of duplicated field buses being referred as a normal system field bus and other thereof being referred as a standby system field bus (See figure 1, wherein multiple paths are shown interconnecting server and client modules.); duplicated main control units for controlling the duplicated field apparatuses; and duplicated communication

control units for processing information communication between the main control units and the duplicated field apparatuses via the duplicated field buses, respectively, wherein one of the duplicated main control units and one of the communication control units constitute a normal system (From line 42 of column 3, "According to one example, the physical slots in which the various hardware modules are connected to, are assigned physical addresses to identify the location of the hardware modules." Further, from line 11 of column 3, "One of the server modules may be configured to be active".), and the other of the duplicated main control units and other of the communication control units constitute a standby system (From line 12 of column 3, "and remaining server modules may be configured to be on standby."), and the normal system of communication control unit is connected via the normal system field bus to the normal system field apparatus so that the normal system of communication control unit executes information communication processing between the main control unit of the own system and the normal system field apparatus via the normal system field bus, and wherein the standby system of communication control unit is connected via the standby system field bus to the standby system field apparatus so that the standby system of communication control unit executes information communication processing between the main control unit of the own system and the standby system field apparatus via the standby system field bus (From line 56 of column 3, "FIG. 1 is an example of a system in which an embodiment of the invention may be implemented. The system may comprise a plurality of server modules 101, 102, 103 that is capable of providing critical functions within a networking system and may be coupled to a bus 110. An example of

such server module may be a central processing module (CPM) that segments information into packets for distribution within the networking system and/or reassembles packets into information to be used by a destination computer (not shown), for example. Examples of packets are "frames" and "cells" which may be used in integrated services digital network (ISDN) protocol. While a plurality of server modules 101, 102,103 may be coupled to the bus 110, one server module 101 may be active to segment and/or reassemble packets. The remaining server modules 102, 103 may be redundant modules that are used as standby modules for the active module 101. According to one embodiment, server modules 101,102, 103 may further include a lookup table 105, 106, 107 that may contain physical addresses of modules that the server modules may be in communication with. Further coupled to the bus 110 may be a plurality of client modules 121, 122, 123. In one example, client modules 121, 122, 123 may be serial data modules (SDMs) that may receive packets from the active server module 101 to transmit into the networking system. Additionally, the SDMs may receive packets from the networking system to transmit to the active server module 101.").

Referring to claim 5, Kumar discloses said normal system of communication control unit further comprises: operation request transmission means for transmitting an operation request to the normal system field apparatus via the normal system field bus based on the normal system field apparatus control information which is transmitted from the main control unit of the own system (From line 12 of column 5, "Turning now to the plurality of client modules 121, 122, 123, in one example, client modules 121, 122,

123 may receive packets from the active server module 101 to transmit the packets into the networking system."); means for receiving response information corresponding to the operation request which transmitted from the normal system field apparatus via the normal system field bus so as to transmit the received response information to the main control unit of the own system (From line 34 of column 5, "In one example, an echo back protocol may be implemented in which a signal is sent back to the transmitting module if the transmitted packet is received at the destination module. Thus, if the client module 121, after a predetermined number of attempts, is not able to transmit a packet to the active server module 101, may reprogram the lookup table 125 to reflect the physical address of a predetermined standby module 102 to be the new active server module."); failure judgment means for judging whether or not failure occurs to the own system (); and means for stopping operation of the own communication control unit when the failure judgment means judges that failure occurs to the own system, and wherein said standby system of communication control unit comprises means for monitoring operation of the other communication control unit which is the normal system so as to switch the own communication control unit which is the standby system to the normal system when detecting the stop of the operation of the other communication control unit according to the monitored result (From line 44 of column 4, "In one example, the active server module 101 may send a packet to one of the standby modules 102. In the event the standby module 102 does not receive a packet from the active server module 101 within a predetermined period of time, the standby module 102 activates to become the new active server module. Once activated, the new active

server module 102 may take over the functions of the previous server module 101 and may start to send packets at fixed intervals to the next standby module 103 at its physical address to indicate that it is functioning. In another method, the standby module 102 may at fixed intervals, send a packet to the active server module 101 at its physical address through the bus 110. In the event the standby module 102 does not receive an acknowledgment from the active server module 101 within a predetermined period of time, the standby module 102 activates to become the active server module.").

Referring to claim 9, Kumar discloses a storage medium used in a field apparatus control system for controlling a field apparatus connected to a field bus, said field apparatus control system comprising duplicated normal and standby main control units for controlling the field apparatus; and duplicated normal and standby computers for processing information communication between the normal and standby main control units and the field apparatus via the field bus, respectively (From line 8 of column 3, "The apparatus may comprise a bus on which a plurality of server modules may be coupled to. One of the server modules may be configured to be active and remaining server modules may be configured to be on standby. A plurality of client modules may be coupled to the bus and configured to be in communication with the active server module using logical addresses."), said storage medium being readable by at least one of the normal and standby computers comprising: means for causing at least one of the normal and standby computers to transmit an operation request to the field apparatus based on control information when the own computer is the normal computer, said control information being transmitted from the normal main control unit

(From line 12 of column 5, "Turning now to the plurality of client modules 121, 122, 123, in one example, client modules 121, 122, 123 may receive packets from the active server module 101 to transmit the packets into the networking system."); means for causing at least one of the normal and standby computers to receive response information corresponding to the operation request transmitted from the field apparatus to an address, said address being allocated to the normal and standby computers (From line 61 of column 4, "According to another method, packets sent by the client modules 121, 122, 123 to the active server module 101 are also routed by the active server module 101 to one of the standby modules 102. However, only the active server module 101 processes the received packets. As for the standby module 102, the received packets may be stored in a buffer on a first in first out basis. As the buffer overflows, the earlier received packets are purged." Further, from line 34 of column 5, "In one example, an echo back protocol may be implemented in which a signal is sent back to the transmitting module if the transmitted packet is received at the destination module. Thus, if the client module 121, after a predetermined number of attempts, is not able to transmit a packet to the active server module 101, may reprogram the lookup table 125 to reflect the physical address of a predetermined standby module 102 to be the new active server module."); means for causing at least one of the normal and standby computers to transmit the received response information to the main control unit of an own system corresponding to the at least one of the normal and standby computers; means for causing at least one of the normal and standby computers to judge whether or not failure occurs to the own system; means for causing at least one of

the normal and standby computers to, when the own computer is the normal computer and it is judged that failure occurs to the own computer, stop the operation of the own computer; and means for causing at least on of the normal and standby computers to monitor operation of the normal computer when the own computer is the standby computer, and when, by the monitored result, detecting the stop of the operation of the normal computer, to switch the own computer which is the standby computer to the normal computer (From line 44 of column 4, "In one example, the active server module 101 may send a packet to one of the standby modules 102. In the event the standby module 102 does not receive a packet from the active server module 101 within a predetermined period of time, the standby module 102 activates to become the new active server module. Once activated, the new active server module 102 may take over the functions of the previous server module 101 and may start to send packets at fixed intervals to the next standby module 103 at its physical address to indicate that it is functioning. In another method, the standby module 102 may at fixed intervals, send a packet to the active server module 101 at its physical address through the bus 110. In the event the standby module 102 does not receive an acknowledgment from the active server module 101 within a predetermined period of time, the standby module 102 activates to become the active server module.").

6. Claims 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5975738 to DeKoning et al. Referring to claim 4, DeKoning et al. disclose a field apparatus control system for controlling duplicated field apparatuses constituting normal and standby systems of field apparatuses (From figure 3, 110.), comprising: duplicated

field buses connected to the duplicated field apparatuses, respectively, said one of duplicated field buses being referred as a normal system field bus and other thereof being referred as a standby system field bus (From figure 3, 150.1 and 150.2.); duplicated main control units for controlling the duplicated field apparatuses (From figure 3, 120.1 and 120.2.); and duplicated communication control units for processing information communication between the main control units and the duplicated field apparatuses via the duplicated field buses, respectively (From figure 3, 118.1 and 118.2.), wherein one of the duplicated main control units and one of the communication control units constitute a normal system (From figure 3, 118.1 and 120.1.), and the other of the duplicated main control units and other of the communication control units constitute a standby system (From figure 3, 118.2 and 120.2.), and the normal system of communication control unit is connected via the normal system field bus to the normal system field apparatus so that the normal system of communication control unit executes information communication processing between the main control unit of the own system and the normal system field apparatus via the normal system field bus, and wherein the standby system of communication control unit is connected via the standby system field bus to the standby system field apparatus so that the standby system of communication control unit executes information communication processing between the main control unit of the own system and the standby system field apparatus via the standby system field bus (From line 9 of column 6, "FIG. 1 is a block diagram of a typical RAID storage subsystem 100, having redundant disk array controllers 118.1 and 118.2 (hereinafter referred to as RDACs), in which the methods and associated

apparatus of the present invention may be applied. RAID storage subsystem 100 includes at least one pair of RDACs 118.1 and 118.2. Each RDAC 118.1 and 118.2 is in turn connected to disk array 108 via buses 150.1 and 150.2, respectively, and to host computers 120.1 and 120.2 via buses 154.1 and 154.2, respectively. Disk array 108 is composed of a plurality of disk drives 110. One of ordinary skill in the art will readily recognize that interface buses 150.1 and 150.2 between RDACs 118.1 and 118.2, respectively, and disk array 108 (including disk drives 110) may each be comprised of a plurality of buses and may be any of several industry standard interface buses including SCSI, IDE, EIDE, IPI, Fiber Channel, SSA, PCI, etc. Circuits (not shown) within RDACs 118.1 and 118.2 appropriate to controlling buses 150.1 and 150.2, respectively are well known to those of ordinary skill in the art. Interface buses 154.1 and 154.2 between RDACs 118.1 and 118.2 and host computers 120.1 and 120.2, respectively, may be any of several standard industry interface buses including SCSI, Fibre Channel, Ethernet (LAN), Token Ring (LAN), etc. Circuits (not shown) within RDACs 118.1 and 118.2 appropriate to controlling bus 154.1 and 154.2, respectively, are well known to those of ordinary skill in the art. Further, those skilled in the art will readily recognize that the methods of the present invention may operate within any number of redundant controller. The pair of RDACs 118.1 and 118.2 shown in FIG. 1 are therefore intended as suggestive of any plurality of redundant controllers.").

Referring to claim 5, DeKoning et al. disclose said normal system of communication control unit further comprises: operation request transmission means for transmitting an operation request to the normal system field apparatus via the normal

system field bus based on the normal system field apparatus control information which is transmitted from the main control unit of the own system (From line 20 of column 12, "Element 310 of FIG. 8 is first operable to send a diagnostic write command from a host computer 120.1 to a first controller 118.1 of the redundant controllers."); means for receiving response information corresponding to the operation request which transmitted from the normal system field apparatus via the normal system field bus so as to transmit the received response information to the main control unit of the own system (From line 25 of column 12, "The method continues with element 320 in which a status is received by the host computer from the first controller indicating whether the diagnostic test completed writing to the private LUN."); failure judgment means for judging whether or not failure occurs to the own system (From line 28 of column 12, "A determination of the success or failure of the diagnostic test of the first controller will be performed by completing the test procedure with the second controller. In other words, the second controller will determine whether the writing operation of the first controller was a success or a failure."); and means for stopping operation of the own communication control unit when the failure judgment means judges that failure occurs to the own system, and wherein said standby system of communication control unit comprises means for monitoring operation of the other communication control unit which is the normal system so as to switch the own communication control unit which is the standby system to the normal system when detecting the stop of the operation of the other communication control unit according to the monitored result (From line 46 of column 12, "Element 340 shows that a status is received by the host from the second

controller indicating that it has performed the special diagnostic write command and determined whether the first controller failed, second controller failed, or neither controller failed. Element 350 determines whether the returned status from the second controller 118.2 indicates that the second controller 118.2 has failed. If so, processing continues with element 354 to await the expected takeover by the first controller 11 8.1 of the data LUNs controlled by the failed second controller 18.2. If the second controller 118.2 has not failed as determined by element 350, processing continue with element 352. Element 352 determines whether the returned status from the second controller 118.2 indicates that the first controller 118.1 has failed. If so indicated, processing continues with element 324, as above, to await the expected takeover by the second controller 118.2 of data LUNs controlled by the failed first controller 118.1. If neither controller is sensed to have failed by operation of elements 350 and 352, processing continues by looping back to element 310 to repeat the method (following a suitable delay period).").

Allowable Subject Matter

7. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Referring to claim 7, the prior art does not teach or fairly suggest, in light of the parent claim, said field bus is configured by a radio system using radio waves in a high frequency band.

8. Claim 6 is allowed.

9. The following is an examiner's statement of reasons for allowance: Referring to claim 6, the prior art does not teach or fairly suggest means for transmitting information to indicate the generation of failure in the first and second field buses to the main control unit when the second judgment means judges that the response information is not transmitted, within the context and scope of claim 6.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5473599 to Li et al.

US 5790775 to Marks et al.

US 5922077 to Espy et al.

US 5928367 to Nelson et al.

US 6513554 to Hellstrom et al.

US 6571355 to Linnell

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel L. Chu whose telephone number is (703) 308-7298. The examiner can normally be reached on weekdays between 8:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel, Jr. can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gc

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